

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

Reserve
A 280.38

Ag 8

agricultural marketing

JUNE 1960



June is Dairy Month

Contents

June 1960

| | |
|--|----|
| Special Milk Program Boosts Milk Consumption | 3 |
| Building Dollar Markets for U. S. Farm Products Overseas | 4 |
| Statistics Help Dairy Industry Market Products | 6 |
| June Is Dairy Month | 7 |
| Milk Goes to Camp | 7 |
| Formula Pricing of Milk under Federal Orders | 8 |
| Fortified Fluid Milk Sales Keep Going Up | 10 |
| Liquid Meters—An Aid in Marketing Fluid Milk | 11 |
| Modern Communications Speed Market News Reports | 12 |
| The Changing Dairy Market | 14 |
| New Wholesale Food Market for Knoxville, Tennessee | 15 |

Cover page

June Is Dairy Month—and Secretary of Agriculture Ezra Taft Benson and his daughter, Flora Beth, find milk a good thirst quencher on a hot summer afternoon. *Agricultural Marketing*, in this issue, salutes the dairy industry with a wide variety of stories on everything from milk meters to dairy statistics.

Reprint material

All articles may be reprinted without permission. Prints of photos and art used in this publication can be obtained from USDA Photo Library, U. S. Department of Agriculture, Washington 25, D. C. Photos used in this issue are identified by the following negative numbers: Cover page, N35812; p. 3, BN1724; p. 4, BN10113 (top), BN10114; p. 5, BN10115; p. 7, BN10116; p. 8, N27484; p. 9, N28495(left), N28490; p. 12, top to bottom, N35711, N35707, N35709; p. 14, N28818(top, left), PMA18377(top, right), BN10117(center), N28412; p. 15, BN9877x(top), BN9880x.

Editor, Milton Hoffman

Associate editor, Jeanne Starr Park

AGRICULTURAL MARKETING is published monthly by the Agricultural Marketing Service, United States Department of Agriculture, Washington 25, D. C. The printing of this publication has been approved by the Bureau of the Budget, March 18, 1959. Yearly subscription rate is \$1.50, domestic; \$2.25, foreign. Single copies are 15 cents each. Subscription orders should be sent to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.



SPECIAL

MILK PROGRAM



BOOSTS MILK CONSUMPTION

by Kenneth E. Anderson and William S. Hoofnagle

THERE'S no doubt about it. Children who attend schools participating in the Special Milk Program drink more milk than those in schools having other types of milk services.

Agricultural Marketing Service researchers find that, over the school year, a child enrolled in a Special Milk Program school drinks 38 more half pints of whole milk than another child attending a nonparticipating school.

What's more, almost 29 percent of the children attending Special Milk Program schools in the Northeast (where the special study was conducted) drink "extra" milk. That is, they consumed more milk than they received as part of their plate lunch.

Only 16 percent of those not in the Program drank "extra" milk.

The study of sample schools in the northeastern United States included children in grades 5 through 9 attending schools both with and without the Special Milk Program. In each sample group, three-fifths of the schools participated in the National School Lunch Program.

Kenneth E. Anderson is an agricultural economist in the Distribution Programs Research Section, Market Development Research Division, AMS. William S. Hoofnagle heads the Section.

In the Special Milk Program schools, considerably fewer youngsters in the sample said they only drank milk away from school—33 percent compared with 40 percent at nonparticipating schools. Only 8.5 percent of those attending Special Milk Program schools included in the sample did not consume any milk during the day. In nonparticipating schools, these children numbered 12 percent of the sample group.

The effect of the Special Milk Program in the grades surveyed appeared to be twofold—

- It increased the level of consumption among regular milk drinkers, and

- It increased the number of youngsters who drank milk.

As might be expected, in-school milk consumption was higher in rural areas than in urban and suburban communities. But, contrary to popular thinking, rural children drank less milk away from school.

The survey showed that children in urban areas of the Northeast consumed larger quantities of milk each day than did those in rural areas.

The Special Milk Program helped increase milk consumption the most

in regions of lower income. The per capita consumption of whole milk by children in Special Milk Program schools serving low-income families averaged 4 ounces higher than that of youngsters in nonparticipating schools. If these children lived in urban and suburban areas, their consumption was over 6 ounces more.

Children from middle-income families also drank slightly more milk if they attended schools having the Special Milk Program. Only in high-income areas was milk consumption about the same in both participating and nonparticipating schools. Also, children from high-income areas consumed more milk than those from low-income areas.

Boys drink more milk than girls, regardless of the age group. Girls under 12 years of age, however, drink more whole milk than girls 12 years and over. They apparently reduce their consumption of whole milk as they enter their teens. Boys, however, maintain about the same rate of whole milk consumption after 12 years of age as they did before they were 12.

The full story of the study on "Consumption of Milk by Children at School and at Home In Relation to Special Milk Program," will be released shortly by USDA.



BUILDING DOLLAR MARKETS FOR U. S. FARM PRODUCTS OVERSEAS



by Patrick M. O'Leary

Nous Vendons Les Poulets Americains. You'll see that sign, or something like it, in many food store windows in French-speaking Geneva. In Zurich, where German is predominant, the message may read *Wir Verkaufen Amerikanische Poulets*. The meaning is the same in both places, however—*We Sell American Chickens*.

It's an advertisement that food merchants like to display because U. S. broiler chickens are popular in Switzerland for both home and restaurant use.

Switzerland "discovered" American poultry fairly recently—in 1955, as a matter of fact. That year a U. S. Department of Agriculture marketing specialist convinced the head of a large Swiss grocery organization that U. S. poultry meat was tailor-made, so to speak, for the Swiss market.

When the first trial order of broiler chickens was snapped up by enthusiastic consumers, the grocery

firm re-ordered. Other Swiss food chains, seeing the way the wind was blowing, also began to place orders.

It has become a real marketing breakthrough. U. S. poultry shipments to Switzerland—all paid for in U. S. dollars—rose from virtually nothing in 1955 to 2.9 million pounds in 1956; to 6.5 million in 1957; to 12.5 million in 1958; to 20.2 million in 1959. A further increase is expected this year.

Market Promotion

This highly successful operation is part of an overall industry-Government effort to promote markets for U. S. farm products in many parts of the world. Since 1954, about 370 separate projects have been initiated in over 40 countries. Close to 30 U. S. trade and farm groups work with the U. S. Department of Agriculture. Promotion is basically a trade responsibility; the Department guides and assists trade effort.

The names of some cooperating groups indicate the variety of commodities covered—Cotton Council International, Dairy Society International, Soybean Council of

America, American Soybean Association, National Renderers' Association, Grain Sorghum Producers Association, Great Plains Wheat Market Development Association, Western Wheat Associates, Millers' National Federation, U. S. Rice Export Development Association, Institute of American Poultry Industries, Burley and Dark Leaf Export Association, Leaf Tobacco Exporters' Association, Tobacco Associates, and others.

Since 1954 trade groups have contributed \$6 million for market promotion. These funds have come from the members. During the same period the Department of Agriculture, through its Foreign Agricultural Service, has made available the equivalent of \$18 million in foreign currencies generated under Title I, Public Law 480. This legislation authorizes the sale of U. S. surplus farm products to dollar-short countries, which pay for the commodities with their own currencies.

Accomplishment can't be measured precisely, but promotion unquestionably is helping to expand

The author is Assistant Administrator in charge of foreign market development and export program operations in the Foreign Agricultural Service, U. S. Department of Agriculture.

exports. In Italy it helped to raise exports of soybeans from the equivalent of half a million bushels in 1954-55 to an estimated 5½ million bushels in the current 1959-60 marketing year.

Market promotion has played a big part in maintaining our tallow exports to Japan at better than 200 million pounds annually. Promotion has helped to raise use of U. S. tobacco leaf in Thailand from 8 million pounds in 1956 to an expected 10 million pounds in 1960. In Germany, as in Switzerland, poultry promotion has been very successful, being instrumental in raising U. S. exports from nothing prior to 1955 to 50 million pounds in 1959.

Promotion Fundamentals

How are markets "promoted"?

Industry groups and the Department use various techniques in calling attention to the wide variety and high quality of U. S. farm products.

There are industry financed visits of foreign buyers to the United States; cotton style shows; cigarette manufacturing demonstrations; mobile cooking schools; feed exhibits; luncheons featuring American foods; giveaways of samples; motion picture shows; radio and TV programs; commodity leaflets; sales personnel training courses; feed seminars; nutrition education courses; and public appearances of commodity "maids" and "queens." Agricultural exhibits in international trade fairs are an effective promotion technique. To date, the United States has taken part in 49 fairs, reaching about 24 million people in 17 different countries.

Prerequisite to successful market promotion is the existence of a favorable economic climate. The economic factors that must pre-exist dollar trade include the following:

1. *The customer country must have substantial "hard money" purchasing power.*

We obviously can make substantial dollar sales of our farm products only to countries that have

sizable earnings of dollars or of other currencies readily convertible to dollars. Our big dollar customers are the prosperous western European countries, Canada, Japan, Australia, New Zealand, and the Union of South Africa. However, about 24 percent of our dollar exports are made to other countries.

Hard money purchasing power of foreign countries is higher now than ever before. For one thing, currency convertibility has increased; that is, countries earning British pounds, German marks, French francs, Dutch guilders, and Italian lira can now buy in the U. S. "dollar market." Also, the dollar reserves of foreign countries have increased in the past 2 years alone by about \$7 billion. There is still another favorable factor in the economically developed countries: Employment is high, and workers are being paid good wages. Part of this increased income is being spent for our food and fiber.

2. *There must be a demand in customer country for the kind of products we are trying to sell.*

If promotion is to be successful, it must be aimed at markets where there is a demand for the kind of products we have to sell or where such a demand can be created. For example, Canada, a leading wheat exporter, is obviously not a customer for U. S. wheat. On the other hand, Canada is a big user of our cotton and citrus fruit, neither of

which she produces.

3. *We must be competitive as to quality and price.*

Quality and prices of our products must be competitive with products produced by other countries.

Our farmers produce high-quality products and it is to our best interest to export high-quality goods. Pricewise, we are competitive in world markets for a long list of products, including soybeans, vegetable oils, lard, tallow, variety meats, poultry, and fruit. Through export payments, we are meeting world prices for cotton, wheat, rice, and feed grains.

4. *The customer country must allow our farm products to compete.*

Too often our farm products don't get a full chance to compete in the customer country. Our food and fiber frequently are kept out by trade barriers of one kind or another, such as high tariffs, quotas, embargoes, and bilateral agreements.

Trade barriers are erected for various reasons. Barriers may reflect the desire of a foreign country to protect its own agricultural producers. Or the country may want to use its foreign exchange for the purchase of manufactured goods instead of agricultural commodities.

During the past year and a half, a number of the more important customers of the United States have relaxed in one or more instances

(continued on page 16)

Agricultural exhibits in international trade fairs promote our farm products. To date, U. S. has taken part in 49 fairs, reaching about 24 million people in 17 countries.



Statistics

HELP DAIRY INDUSTRY

MARKET PRODUCTS



by Ira E. Wissinger

Whatever your role in the production and marketing of dairy products, you'll find something of interest—and value—in the statistical reports put out by the Crop Reporting Board of the Agricultural Marketing Service.

These reports cover the entire field of dairying—from farm to warehouse, factory, and consumer.

Pick your category—

At the farm level, there are reports on the number of milk cows, the amount of their production, prices received, and the utilization

of milk and cream.

For the processor, statistics are available on manufactured dairy products, stocks, prices, and the cost of the milk and cream used to produce them.

And, information is published periodically on fluid milk and cream prices and consumption in major marketing areas.

You can get up-to-date information on all three of these major phases of the dairy industry in the annual report, "Milk Production on Farms and Statistics of Dairy Plant Products," which is issued in mid-February.

But let's take the categories one by one.

If you're a dairy farmer, you are interested in farm facts and figures—milk cow numbers, milk production, and feeding rates. You'll find them all in the "General Crop Report" issued about the 10th of each month. This report is followed, a day or so later, by a supplementary report ("Milk Production") containing more complete details.

Then, around April 15th the annual bulletin, "Milk, Farm Production, Disposition, and Income," is published. It summarizes milk cow numbers, production per cow, and total production of milk and milkfat. It also reports on the use and marketing of milk and cream.

Most of the information for the milk production reports comes from the dairy farmers themselves. Thousands of dairymen provide the 41 State-Federal Crop and Livestock Reporting Service field offices with reports on the size and type of their operations.

For those seeking information on manufactured dairy products, there is an equally extensive and efficient system of reporting. Information for the annual bulletin, "Production of Manufactured Dairy Products" is based on mailed inquiries to some 37,000 firms. The report contains monthly and yearly figures on 47 dairy commodities by States. It is issued each August.

Processors and manufacturers can

also keep informed through the weekly report on creamery butter and American cheese (by regions), a monthly release on butter, American cheese, and ice cream (by States), and a monthly report on miscellaneous types of cheeses, evaporated and condensed milk, dry milk products, sherbet, ice milk, Mellorine, and water ices (for the United States as a whole).

Reports on all but the condensed and dried products are prepared by the AMS Dairy Statistics Branch in Chicago. This office also releases the weekly "American Cheese Warehouse Report" and a bulletin on prices paid farmers for milk used in making butter and cheese.

From Washington, D. C., comes the monthly "Condensed, Evaporated, and Dry Milk Report." This keeps the industry posted on manufacturers' production, stocks, shipments, product prices, and prices paid to farmers for milk. A quarterly report on grocers' stocks of evaporated and condensed milk gives the manufacturers of those products a good look at the supply side of their industry.

And for everybody who buys and sells dairy products, milk, and cream, there are the price and consumption reports

Current price trends in fluid milk markets are announced each month in the "Fluid Milk and Cream Report," which contains statistics from 160 major marketing cities or areas in the country.

Also, a tally is made every two years of per capita consumption of fluid milk and cream items in the Northeast and other selected areas. The latest report of this kind was published in April 1958. Nonfarm, farm, and total per capita consumption estimates for the entire United States are prepared each year and appear in the April issue of the "Fluid Milk and Cream Report."

So, wherever you are, whatever your dairying operation, there's an AMS statistical report for you. Use it!

The author is Chief of the Dairy Statistics Branch, Agricultural Estimates Division, AMS.



Industry and government join hands to promote June as Dairy Month. Pictured in Chicago retail store are: Howard Miller, Food Distribution Division, AMS; Ann Paido, local housewife; Ed Kush, store manager; Jae Styrzculo, dairy truck driver; and Charles Fahler of the national ADA office.

JUNE IS DAIRY MONTH

JUNE is Dairy Month, the time of year when all segments of the Nation's important dairy industry join hands to honor the nutritious dairy products of America's lush green pastures. And this year will mark the 23rd anniversary of the event.

Spearheading this early summer drive to call special attention to dairy products is the American Dairy Association, promotional and advertising arm of the Nation's dairy farmers, assisted by numerous other dairy organizations.

USDA is again cooperating with this industry at the time of its peak production by featuring milk and dairy products on its June roster of plentiful foods. The Department will also distribute thousands of fact sheets, or "flyers," to the food industry and to national press, radio, and TV outlets.

Supporting this nationwide campaign on milk and dairy products will be State and local June Dairy Month programs by dairy farmer groups in local markets, the State units of ADA, State departments of agriculture, and individual distributors and processors.

There will be a Dairy Princess, a charming young lady who will

travel all over the country to bring the message of goodwill and good health from the dairy industry to the consuming public.

In addition to this Princess, dairy days will be featured; parades and festivals will be held; and proclamations issued by mayors and governors over the Nation.

By means of newspapers and magazines, radio and television, homemakers will be reminded of the nutritional values of milk and its many products, with suggestions of appetizing ways of serving dairy foods not only during the month of June but throughout the entire year.

The Sponsor Committee is headquartered at the American Dairy Association in Chicago. Other dairy organizations sponsoring June Dairy Month are: American Butter Institute, American Dry Milk Institute, Dairy Association Executives, Dairy Industries' Supply Association, Evaporated Milk Assn., International Assn. of Ice Cream Manufacturers, Milk Industry Foundation, National Cheese Institute, National Creameries Assn., National Dairy Council, National Milk Producers' Federation, and the Purebred Dairy Cattle Assn. ■

Milk Goes To Camp

When the Nation's youngsters make their annual June transition from school to summer camp, a very important part of their diet can go right along with them through the provisions of the Federal Special Milk Program.

School children throughout the country have become accustomed to drinking more milk under the Special Milk Program, which is designed to increase milk consumption by reimbursing schools and institutions for part of the cost of additional milk served, and making it possible to lower the price to youngsters. In fiscal year 1959, nearly 2.2 billion half-pints of milk were served under the program—an amount equal to about 2 percent of annual fluid milk consumption in the United States.

The program, first authorized by Congress in 1954 as a phase of the dairy price support operations, was extended in 1956 to include summer camps, recreation centers, nursery schools, settlement houses, and other child-care institutions. Thus, it encourages children to drink milk during the summer when nutritional needs are high but all too frequently neglected.

The program is administered nationally by USDA's Agricultural Marketing Service.

A variety of activities and organizations are eligible to participate in the Special Milk Program. Summer camps include about all types of organized activity conducted for children, including nonprofit camps operated by boys' and girls' clubs, civic or church groups, Boy and Girl Scouts, 4-H Clubs, and so on.

Also eligible are the "fresh air" camps for underprivileged city youngsters and organized recreational programs at community playgrounds and parks.



Formula Pricing of Milk

UNDER FEDERAL ORDERS^X

by John R. Hanson

FEDERAL milk marketing orders, which establish minimum prices to producers, have been in effect more than 25 years.

Some 189,000 producers annually sell 40 billion pounds of milk to handlers in 79 regulated fluid milk

markets. These handlers, in turn, serve nearly two-thirds of the Nation's nonfarm population.

Federal milk marketing orders are issued by the Secretary of Agriculture and administered by the Dairy Division of the USDA Agricultural Marketing Service. They are designed to stabilize conditions under which farmers market milk for fluid use and to help assure de-

pendable supplies to consumers.

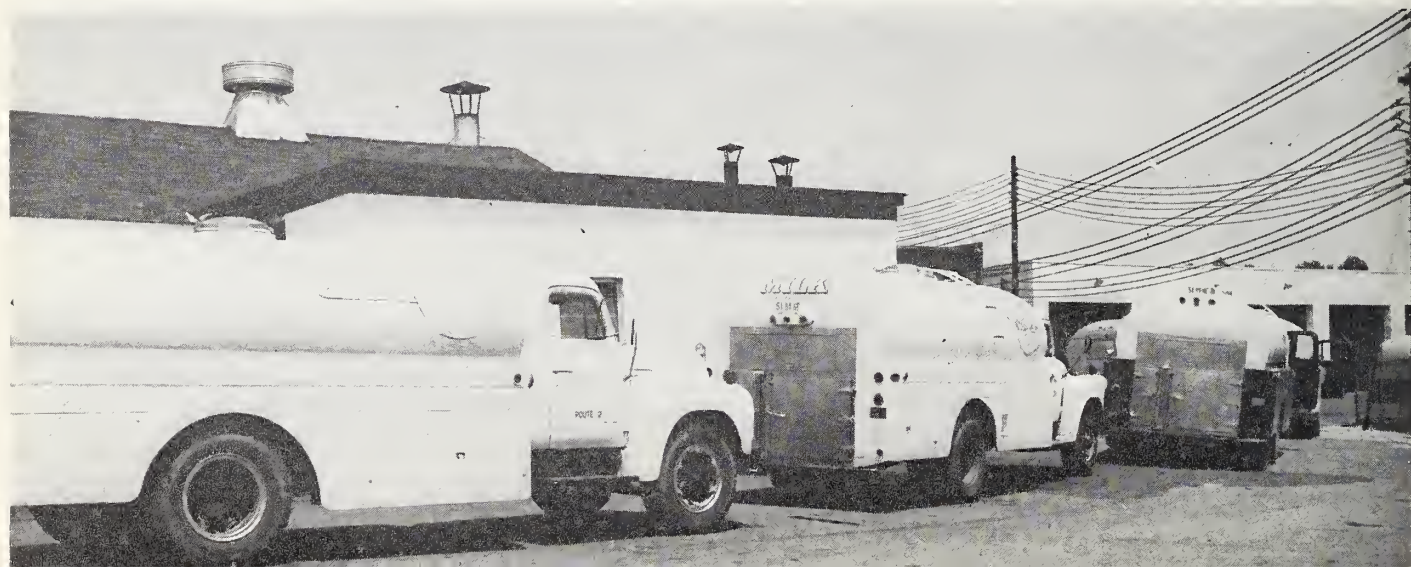
To achieve its dual purpose, the law prescribes a method for fixing or computing, specific minimum prices to be paid in individual markets by milk dealers to producers.

It does not provide for regulating retail prices. There is no authority to limit the quantity to be marketed. There is no provision for taking part of the milk out of trade channels. And there is no fund from which to guarantee a set price.

This means Federal milk marketing orders cannot be used to maintain artificially high price levels. They can, however, correct price disparity in local situations and maintain prices to farmers which will direct milk into the best available markets.

All handlers regulated by orders are required to pay at least the

The author is a staff member of the Dairy Division, Agricultural Marketing Service.





Federal milk marketing orders stabilize the conditions under which farmers market their milk for fluid use and help assure dependable supplies to consumers.

minimum price established for each class. The law specifies that milk shall be classified according to the form in which, or purpose for which, it is used and that a minimum price, or method for fixing the minimum prices, for each classification be established.

Usually, there are two classes: Class I for milk which handlers sell to consumers in fluid form, and Class II for milk which the dealer cannot sell for fluid use and which he diverts to manufacturing uses.

Prices are set in accordance with the prevailing supply and demand situation. And, because of this, frequent changes are necessary.

A flexible pricing arrangement is achieved through the use of formulas.

Unfortunately, the same formula will not work for all marketing areas. Each market must have its own specially tailored formula and when there are radical changes in marketing conditions affecting either the supply or demand, the formula must be revised.

Basically, here are the three requirements for establishing price formulas—

- Price levels must be aimed at promoting an adequate, but not excessive, supply of pure and wholesome milk for consumers in the marketing area.
- Price formulas must interpret promptly any change in economic

conditions which significantly affects the balance of supply and demand.

- The formulas for computing milk prices must be arrived at on the basis of public procedures with public participation, and the details of the pricing formulas must be determined and announced in advance.

In any Class I formula, the price for fluid milk must be kept in reasonable relationship with the prices for manufactured dairy products.

Federal milk marketing orders employ two types of formulas to set minimum Class I values. One is an "economic-type" formula; the other is based directly on the value of milk used for manufacturing or on dairy product prices.

The first economic type formula was developed to meet the specific needs of the Boston market. In that formula the Class I price moves in direct relationship with: (1) the prices of all wholesale commodities in the United States; (2) the levels of per capita disposable consumer income in New England; and (3) grain and labor costs in the New England region.

The formula also provides for an automatic price adjustment based on the amount of fluid sales relative to the amount of milk produced for these sales currently, as compared with the normal ratio, or balance, of supply to fluid sales.

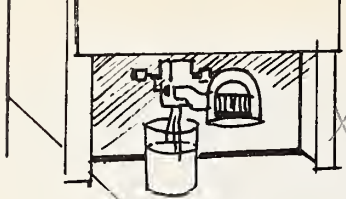
This type of adjustment is commonly known as the "supply-demand adjuster."

In formulas based directly on manufacturing milk or dairy product prices, a differential is added to this basic price. The differential provides an additional incentive so that an adequate supply of "graded" bottling milk may be obtained. Supply-demand adjusters are used here also to adjust the differentials.

With the increasing interdependence of fluid milk markets, it has become necessary to coordinate price movements among markets exactly. A small disparity in the alignment of Class I prices encourages uneconomic shifts in the sources of milk supply. While formulas have not completely solved this problem, they have provided a means for maintaining appropriate intermarket price relationships.

The use of formulas, finally, contributes objectivity to the establishment of minimum prices for Class I milk. With formula pricing, the public is advised not only of the amount of any price change but of the factors which caused the change.

Through formula pricing, all in the dairy industry know the "rules of the game" and are able to plan their businesses with more assurance.



FORTIFIED FLUID MILK SALES KEEP GOING UP

by Anna A. Schlenker

WHATEVER you call it—"fortified" skim milk, "modified" skim milk, or skim milk "with added milk solids-not-fat"—this relatively new dairy item is being consumed in rapidly increasing quantities.

Commercially important only within the last five or six years, this product is skim milk to which nonfat dry milk or condensed skim milk has been added. It has more body and, with the added ingredients, has a higher food value than ordinary skim milk.

Fortified skim milk is not necessarily fully skimmed milk, but often contains as much as 2 percent milkfat. It sometimes also contains added vitamins. Trade names under which it reaches consumers, however, suggest its relatively nonfattening, health-benefiting qualities.

Fortified skim milk is only one of a long line of fortified fluid milk products now on the market. There's fortified "cereal cream," buttermilk, sour cream, whole milk, flavored milk, flavored skim milk, light and heavy cream, and yogurt.

According to a survey made by the Dairy Division of AMS, each of these fortified fluid milk products was sold in one or more of the markets under Federal milk orders.

The author is a staff member of the Dairy Division of the Agricultural Marketing Service.

Skim milk was by far the most popular of the fortified products. It was offered for sale in 64 of the 76 markets surveyed. Fortified "cereal cream," a mixture of milk and cream, rated next in popularity with sales in 44 markets.

Some fortified buttermilk and fortified sour cream was being sold in more than a third of the markets. Also, 4 to 11 markets were offering fortified whole milk, flavored milk, flavored skim milk, light and heavy cream, and yogurt.

Fluid products with added nonfat milk solids are being sold to a larger extent in the Middle West than anywhere else in the country. While no one market fortified all of its fluid milk products, in Chicago eight different items were fortified. In three markets—Cincinnati, Milwaukee, and Southeastern Florida—seven different fortified products were available.

Most of the fluid milk products were fortified by about 2 percent of their weight. Buttermilk was fortified the least (an average of 1.5 percent) and yogurt the most (2.3 percent).

Among individual distributors, however, the extent of fortification ranged from less than $\frac{1}{2}$ of 1 percent to more than 5 percent.

Data on quantities of fortified milk products sold are available only for skim milk. In 1959, sales

of fortified skim milk in 61 markets amounted to 465 million pounds. This represented 2.9 percent of all milk beverages sold in these markets.

In some individual markets, however, fortified skim milk sales represented a much higher percentage of total fluid milk sales. For example, in two Iowa markets (the Quad Cities and Cedar Rapids) fortified skim milk accounted for 10 percent or more of all milk beverage sales. In six other Midwest markets, the southernmost of which is Cincinnati, sales were more than 5 percent of total milk beverages. At the other extreme, in seven markets located in Virginia, Tennessee, and Arkansas, no fortified skim milk was sold.

Although fortified skim milk still comprises a relatively small proportion of all milk beverages sold in Federal order markets, the percentage is steadily increasing. During 1959 in these same 61 markets, handlers' sales of fortified skim milk showed an increase of 23 percent over 1958.

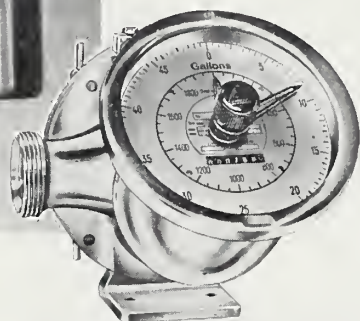
Of the 54 markets in which any fortified skim milk was sold, 46 markets showed an increase in their sales during the years under comparison. In 24 markets the increase was 20 percent or more, and in 11 of these it was more than 50 percent.





Liquid meters

AN AID IN MARKETING FLUID MILK



by Fred Stein

METERS for measuring liquids have been used in this country for many years—for everything from measuring water consumption in the home to measuring quantities of highly volatile chemicals or fuels at plants and missile centers.

Yet, despite their widespread acceptance, meters have only recently been developed for the American dairy industry. It has been difficult to manufacture a meter that meets the stringent requirements of accuracy and cleanliness.

Milk meters, however, can be an important aid to the dairy industry. Their use simplifies the problem of checking the amount of milk and milk products received at the plant. They also are helpful in various plant operations and in the final measurement of bulk milk as it leaves the plant.

At the farm, milk meters may eventually be of use on bulk tank trucks. This would eliminate the costs of calibrating and recalibrating farm tanks. And it would remove the possibility of human errors in weighing and sampling the milk.

In general, there are four types of flowmeters adapted for the

dairy industry—positive displacement, turbine, ultrasonic, and electromagnetic meters.

A recent survey by the Dairy Division of the Agricultural Marketing Service showed how these meters are being put to use in 74 of the Federal milk order markets.

Meters are used mostly to measure plant receipts of milk from farm pickup tankers. In this way, they provide an at-plant check of the quantities of milk measured on the farm.

A comparison of farm measurements with flowmeter recordings at the plant showed the weights of only 7 percent of the shipments in complete agreement. Forty-eight percent of the farm measurements were higher than the metered readings; 45 percent were lower.

Within the plant, dairy processors use flowmeters to measure the quantities of milk, cream, and skim milk used in the manufacturing operation. They also use them to measure liquid ingredients of batch-mixed products such as ice cream mix.

In a few milk markets, flowmeters are installed to record the quantity of bulk fluid products as they move out of the plant.

Only at the farm level is the use of flowmeters somewhat undeter-

mined. A satisfactory flowmeter has not yet been developed for use on pickup tank trucks.

But, in the areas where flowmeters are being used, their numbers are increasing. Whereas two years ago only about a third of the milk markets surveyed by AMS used meters, in January of this year about two-thirds reported their use.

The cost of flowmeters varies widely with the type of meter, its size, and its flow rate. Generally speaking, a positive displacement milk meter costs from \$1,500 to \$3,000. Turbine meters run anywhere from \$900 to \$1,700, and variable area meters from \$300 to \$400.

Costs of ultrasonic and electromagnetic flowmeters are not available. These instruments are still in the experimental stage.

Actually, much additional research and development on milk meters is needed. Some meters have already proved their usefulness within milk plants for checking overall receipts and product flow. But whether meters will eventually find important application in measuring volumes of individual producers remains to be seen. It will depend on how well the meters meet the critical requirements of accuracy, reliability, and sanitary acceptability.

The author is a marketing specialist in the Dairy Division of the Agricultural Marketing Service.

X Modern Communications

by H. O. Wolf

FORTY-FIVE years ago in Hammond, La., a shirt-sleeved, suspended, commercial telegrapher lowered his green eye-shade and laboriously began to click off the first official market news report.

Translating the dots and dashes of his Morse code message were other agents at receiving points along the telegraph route. They quickly copied the report in long-hand—or, picked it out on an old-fashioned typewriter—then, dispatched it by messenger to the marketing community.


Even as far back as 1915, the need for speed was apparent. Then, as now, effective and efficient marketing of farm products depended on the sales information available to both buyers and sellers.

As communication facilities improved, so too did the market news system. Today, market news reports move swiftly over 13,000 miles of leased teletype wire to market news offices in all parts of the country. The time lag between sales and reports is seldom more than a couple of hours.


Ninety-one offices are maintained the year around by the Federal-State Market News Service, and another 38 offices are open during peak production seasons.

Because production areas follow no particular pattern, market news offices are scattered hodge-podge across the country. They are located wherever there are significant marketings of farm products. Coverage includes cotton and cottonseed; dairy and poultry; fruits and vegetables; grain, hay, feed, seed, rice, hops, and beans; livestock,

The author is Head of the Leased Wire Section, Administrative Services Division, Agricultural Marketing Service.



Largest market news office in the country is located in the South Building of the U. S. Department of Agriculture. Over 170,000 words a day move through this station.



At left is clearing house desk of USDA's market news relay center. Master sending machine below can transmit 12 different messages at once.

SPEED MARKET NEWS REPORTS



meat, and wool; naval stores; and tobacco.

The network of wires which link market news offices is very similar to the old-fashioned "party line." The reports go out along the circuit and each office on the circuit receives all reports. Most offices, in turn, can send out reports of their own.

Each of the nine "leased wire" circuits has its own sending schedule. Operators along the wire know when a particular report is coming through and are ready for it. For instance, New York eggs are reported at 11:20 a.m. each day; cattle reports from Chicago go on the wire at 11:30 a.m., local time.

Unfortunately, this schedule cannot always be followed. If, for example, trading on the New York egg market is particularly brisk, the reporter may not be sure of the price as early as 11:20. Then his reserved time must be relinquished and the report sent later.

This, of course, disrupts the wire schedule. The lagging report has left a gap at 11:20; it will have to bump another report later in the day.

But, the unusually active New York egg market is now "hot" news. Whenever this report is ready, it will be transmitted immediately—be it 11:30, 11:45, or even 12 noon (should it be as late as that).

To adapt the wire service to such irregularities requires careful management. Not only does the New York operator have to make a quick adjustment in his sending schedule, but other operators on the circuit must work together to be ready to squeeze the egg market news report onto a loaded line.

These operators, incidentally, are usually girls. The introduction of teletypewriters has made it possible for trained typists to replace the male telegraphers of the dash-and-dot days. In fact, many of today's operators are clerk-stenographers who transmit teletype messages as just one of their duties.

These girls "punch" the news reports onto ribbons of paper tape shortly before the circuit is ready for their report. Because they can take their time in typing the reports and check the tape carefully before sending it out, the market news reports are completely accurate when they move onto the "leased" wire circuits.

Most important, taping in advance permits the report to be fed into the leased wire system at rates of up to 100 words per minute.

This pretaping and fast transmittal make it possible to move 250,000 words over the 13,000 miles of leased wire each day. Even more significant from the standpoint of making news useful in fast and intelligent market decision-making is the fact that 125,000 words are crowded into the peak period between 11 a.m. and 2 p.m.

In the past 2½ years, the volume of market information handled on the leased wire circuits has increased 42 percent. Some of this increase has resulted from technical improvements in transmittal equipment by American Telephone and Telegraph Company from whom the lines are leased. Much, however, comes from the continuing emphasis the U. S. Department of Agriculture has put upon management of line usage and simplified operating techniques.

• "Relay points" have been established at Washington, Atlanta, Kansas City and San Francisco. These stations tie the nine leased wire circuits together so that reports selected from one circuit can be sent out on one or more of the other circuits.

• "Subsidiary" circuits are fed from leased wire offices at San Francisco, Chicago, and Denver.

The AMS operator simply takes the appropriate "markets" off the leased wire circuit by re-perforator tape, feeds them into the transmitter of the subsidiary circuit, and the news items are delivered directly in the offices of anyone who wishes to pay his proportionate share of line costs and receiving equipment along that circuit.

• "Pony" circuits also are maintained in Atlanta and San Francisco. These are short lines which feed market news reports to local offices of the wire services—Associated Press and United Press International—which in turn transmit them to radio and television stations and to newspapers.

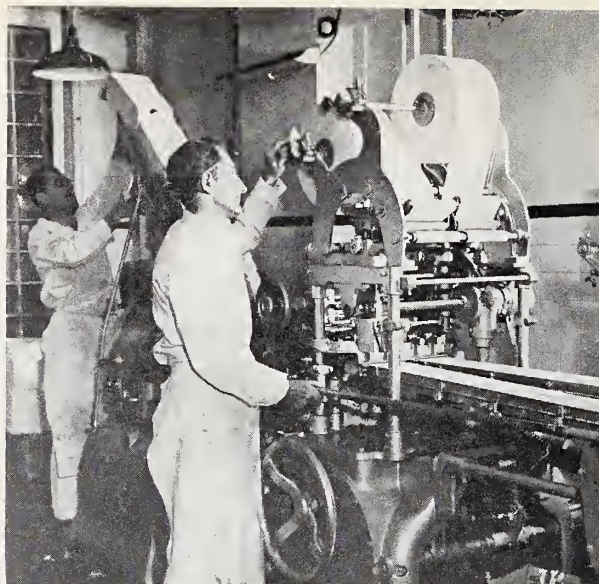
In Fort Worth, a "pony" transmits reports directly to the *Star Telegram*. Elsewhere, similar circuits feed markets to Western Union.

• Similar arrangements are in operation in some States where the State department of markets has its own leased wire system for distribution and collection within the State. Direct lines provide them with outside market reports which they then relay to their own offices on their own circuits.

• In the USDA central wire room in Washington, D.C., as well as
(continued on page 16)



Sales of nonfat dry milk for household use spiraled from 2 million pounds in 1948 to 169 million in 1958. Commercial sales doubled.



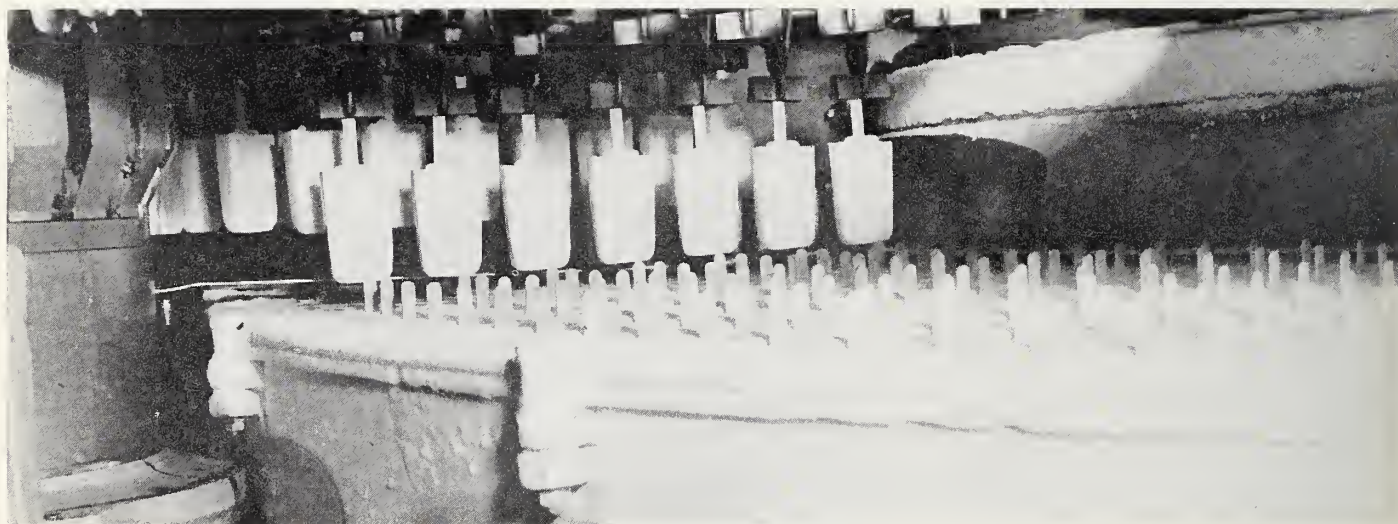
About 574,000,000 pounds of butter bore USDA grade markings in 1959. This was 43% of total production.

Of all dairy products, cottage cheese has had greatest rate of growth over the past 10 years.



✓ **The Changing Dairy Market**

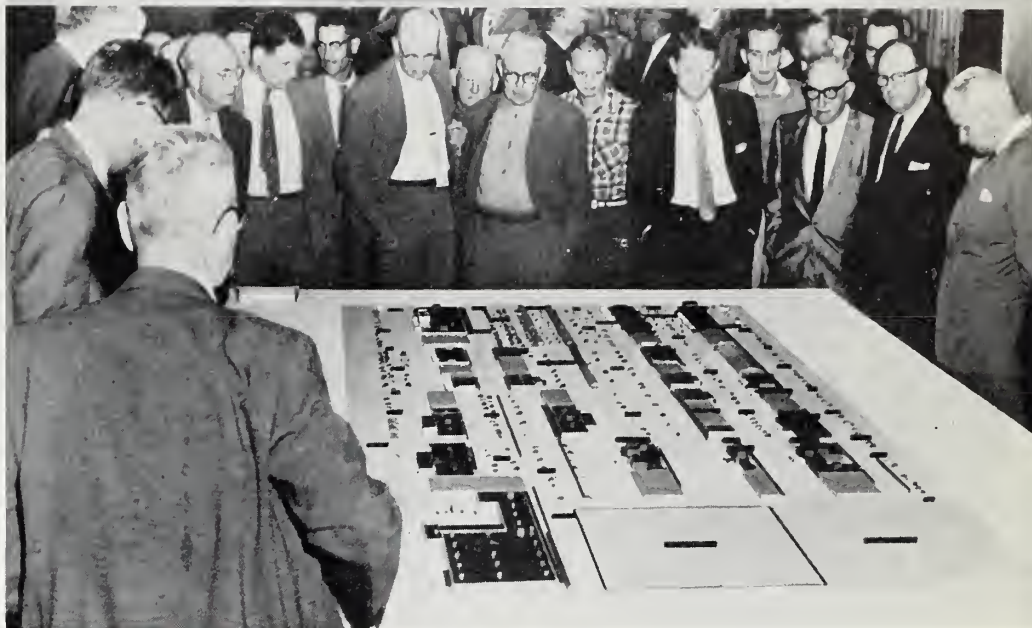
Huge, automatic "stick novelty" machine turns out ice cream pops at the rate of 10,000 an hour. As ice cream freezes, the entire drum of molds revolves.



THE OLD



X NEW WHOLESALE FOOD MARKET FOR KNOXVILLE X



by Kenneth L. Utter and Earl G. Taylor

A NEW wholesale food distribution market is being considered for Knoxville, Tenn.—a market which will save producers, wholesalers, retailers, and consumers an estimated \$430,000 a year in marketing costs.

Located in the heart of the second most heavily populated area in Tennessee, Knoxville is the distribution center for three counties. It also provides food for parts of Kentucky, North Carolina, and Virginia.

Nearly 1.7 million people received over 23,500 carlot equivalents of food in 1958 from 61 Knoxville wholesale houses.

As the population of this area expands (experts predict 2 million people by 1970), the marketing job

grows more difficult. And, present facilities in Knoxville don't make it any easier.

The market areas are scattered across the city; buildings are old-fashioned and inefficient; and there's little chance to utilize modern handling equipment and methods.

To adequately and efficiently supply its rapidly growing population with food, Knoxville needs a new wholesale distribution center.

City planners and others within the State have been aware of this for some time. As long ago as 1940, the Tennessee Experiment Station put out a series of publications describing the fruit and vegetable marketing situation.

In 1958, the Agricultural Marketing Service of the U.S. Department of Agriculture was asked to make a detailed study of the overall food marketing situation in Knoxville.

The request came from the Knoxville Chamber of Commerce, the Tennessee Extension Service, Tennessee Experiment Station, and interested local officials.

This study showed that cartage, handling, interdealer movement, spoilage, breakage, deterioration, shrinkage, and rentals cost Knoxville wholesalers over \$2.5 million a year.

According to the study, nearly a fifth of this could be saved if better facilities were available at a single location.

Right now, food dealers are spread throughout the city—a farmers' market for both wholesale and retail sales in one location and wholesale operations in two other sections of town. For anybody buying all the items for a grocery store, the job of shopping the various markets is both time-consuming and costly.

Within the individual areas—

(continued on page 16)

The authors are marketing researchers in the Transportation and Facilities Research Division of the Agricultural Marketing Service.

A copy of the full report, "Wholesale Food Distribution Facilities for Knoxville, Tenn.," will be issued shortly. Copies may be obtained from the U. S. Department of Agriculture.

Food Market for Knoxville

(continued from page 15)

Market Square, the Western Avenue Market, the Forest Avenue Market, or on Jackson Avenue—the facilities are inadequate. Buildings are not designed for modern-day handling equipment. Entrances are too few and too small, and most wholesalers have neither house tracks nor adequate loading platforms.

This, of course, means high cartage and handling costs.

Because the markets are spread throughout the city and surrounded by other business enterprises, future expansion of any of the market areas is practically impossible.

What Knoxville needs is a completely integrated food distribution center, located along major truck and rail routes, with modern buildings, plenty of loading space, and ample parking. Such facilities would cut operational costs some \$840,000 a year. And, even with the increased rentals necessary to amortize these improved facilities, wholesalers could still realize a net savings of \$430,000.

To handle present and future needs, AMS market specialists figure the new Knoxville food center should have—

- 51 multiple store units (35 for fruit and vegetable wholesalers; 10 for poultry and egg men; and 6 for meat dealers)

- 20 small units for trucker-jobbers and growers of fruits and vegetables

- 250 farmers' stalls (150 covered and 100 open)

- 16 detached buildings (1 for poultry and egg wholesalers; 2 for

packer-branch houses; 3 for meat slaughtering operations; 6 for dry grocery and frozen food wholesalers; and 4 for food chain stores)

PLUS a restaurant, container shed, and 20 offices in the fruit and vegetable section.

A public refrigerated warehouse would also be needed, and an area of about 22 acres should be allotted for allied industries wishing to locate near the food marketing center.

Other features should include spacious (160-foot wide) streets, ample parking areas, direct double rail connections, and room for future expansion.

Market News Communications

(continued from page 13)

some other points, tape is being used experimentally to put wire reports directly on mimeograph stencils. This system is quicker than having a typist copy the report onto the stencil—and it produces a completely accurate transcript.

“Relay” stations, “pony” circuits, teletypewriters, automatic stencil cutters—these are the tools of a fast, efficient, effective, and more meaningful market news service. This modern high speed movement of nationwide news is a far cry from the sending key of that suspended telegrapher in Hammond, La., some 45 years ago.

But in not too many years, these too may become outmoded. And, as they do, the Federal-State Market News Service will turn to new and better means of transmitting messages.

Farm Products Overseas

(continued from page 5)

their import restrictions against our farm products. Prosperity in many countries of the free world and the improved situation in foreign exchange holdings mentioned earlier have made these moves possible.

The United States, through diplomatic representations to foreign governments and participation in the work of international organizations, is pressing for the complete elimination of discrimination against imports from the dollar area and a rapid removal of quantitative import restrictions.

Intensified foreign marketing work, capitalizing on the improving economic status of our customers, is paying off in the form of increased sales for dollars. In the fiscal year 1959-60 U. S. agricultural export volume will have a value of \$4.5 billion, second-highest in history. Of this amount, \$3.3 billion or close to 75 percent, will be sales for dollars.

The record U. S. farm export mark was set in 1956-57, when products worth \$4.7 billion were shipped. But dollar sales in the record year totaled only \$2.8 billion, or just 60 percent of total exports, the other 40 percent moving under the special Government programs: Sales for foreign currency, barter for strategic materials, and donations.

It has been said that “market promotion is salesmanship on a big scale.” As American agriculture continues its efforts to build a bigger and sounder agricultural export trade, market promotion—salesmanship, that is—will play an increasingly important role.